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DEPARTMENT OF FISH & GAME

Joseph C. Greenley, Director

FEDERAL AID TO FISH AND WILDLIFE RESTORATION

Job Performance Report

Project F-71-R-3

REGIONAL FISHERY MANAGEMENT INVESTIGATIONS

Job V-b. Region 5 Lowland Lake Investigations
Job V-c. Region 5 Stream Investigations
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by

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February, 1979

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JOB PERFORMANCE REPORT

State of Idaho

Project No. F-71-R-3

Job No. V-b

Name: REGIONAL FISHERY MANAGEMENT INVESTIGATIONS

Title: Region 5 Lowland Lakes Investigations

Period Covered: 1 January 1978 to 31 December 1978

ABSTRACT

Returns of spring planted rainbow trout over a 3-year period at Deep Creek Reservoir, Devils Creek Reservoir and Daniels Reservoir were 19.2%, 19.0% and 16.6%, respectively. Returns of summer planted rainbow trout over the same period at Deep Creek Reservoir, Devils Creek Reservoir and Daniels Reservoir were 11.6%, 11.6% and 14.0%, respectively.

Of 564 anglers at Daniels Reservoir, 322 (57%) were still fishing from a boat, 195 (35%) were bank fishing and 47 (8%) were trolling. In addition, 517 of the 564 anglers (92%) were bait fishing and 47 (8%) were fishing with lures and flies. Anglers also indicated a desire to fish the reservoir because of its good fishing (40%) and a desire for fewer but bigger fish (choice of 62%) to be accomplished by a limit reduction (choice of 40%).

Gill netting in three Franklin County reservoirs indicated a high population of Utah chubs in Lamont and Foster and mountain suckers in Glendale.

Construction of McTucker Ponds, old gravel pits on Bureau of Reclamation lands near American Falls Reservoir, were completed in 1978. Subsequently, the ponds were treated and replanted with game fish.

Author:

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OBJECTIVES

To evaluate survival and return to the creel of hatchery trout in selected reservoirs.

To collect fish population information from selected reservoirs in Region 5.

To assess nongame fish populations in McTucker Ponds and take measures to establish a new fishery.

To collect creel census information needed for the management of selected lowland lakes and reservoirs.

TECHNIQUES USED

Tag Returns

In 1976 we jaw tagged and released 500 rainbow trout on two separate occasions in three different reservoirs in Oneida County. Purpose of the tagging was to compare returns of fish planted in the spring vs. summer. The reservoirs planted with tagged fish were Deep Creek, Devils Creek and Daniels.

Reservoir Gill Netting

We made gill net sets in 1978 in the following reservoirs to assess their fish population: LaMont, Foster, Glendale, Oneida and Chesterfield. In most cases overnight sets were made and experimental nylon sets used. In all cases fish sizes were determined by a total length measurement.

McTucker Ponds

Construction of three gravel pit ponds, known as McTucker Ponds, was completed in 1978. Gill netting indicated that they contained populations of nongame fish. The ponds were treated with rotenone in September, 1978. Live box tests indicated the ponds were detoxified about one month after treatment. They were then planted with catchable size rainbow trout.

Questionnaire-Daniels Reservoir

A preference questionnaire was used while checking anglers at Daniels Reservoir. A selected number of anglers were asked why they fish Daniels Reservoir and given the following four choices: close home, good fishing, like spot and big fish. The anglers were then asked if they preferred to catch twice as many fish as present but only one-half the size, the size they were presently catching, or only one-half the present number, but twice the size. If smaller fish were preferred, the angler was then asked if it should be acoomplished by a year round fishing season or an increased limit. If larger fish were preferred, the angler was asked if this should be accomplished by a reduced limit, shortened season or gear restriction. In addition, information was collected as to the methods of fishing.

Creel Census

Virtually all personnel in Region 5 helped with the collection of creel census information; however, the majority was collected by members of the Enforcement Bureau. In most instances anglers were contacted while fishing and information recorded as to the number of hours fished and catch.

FINDINGS

Hatchery Returns

Returns of rainbow trout planted 3 May 1976, varied from 19.2% at Deep Creek Reservoir to 16. 6% at Daniels Reservoir. Returns from trout planted 19 July 1976, varied from 11.6% at Deep Creek and Devils Creek reservoirs to 14.0% at Daniels Reservoir (Table 1). The lower returns from the midsummer plant are probably due to the small size of fish planted, 2.7 kg (5.9/lb) and the reduced mid-season fishing pressure. It appears that most of these tagged fish have either succumbed to natural or angling mortality as tag returns were much lower in 1978 than either 1976 or 1977. The midsummer plants at each reservoir should be discontinued because of its lower returns when compared to the spring plants.

Daniels Reservoir-Fishing Methods and Questionnaire Results

From May through September, 1978, we checked fishing methods of 564 anglers at Daniels Reservoir. Of this total 322 (57%) were still fishing from a boat, 195 (35%) were bank fishing and 47 (8%) were trolling (Table 2). In addition, 517 of the 564 anglers (92%) were fishing with bait, 43 (8%) were fishing with lures and 4 (<1%) were fishing with flies.

We asked 53 anglers why they fished Daniels Reservoir and gave them a choice of four answers. Of this total, 21 (40%) chose good fishing, 16 (30%) chose close to home, 13 (25%) chose big fish and 3 (5%) chose like spot (Table 3). Thirty-three of the 53 anglers (62%) indicated a desire for fewer but bigger fish, 15 (28%) indicated they were happy with the present size and 5 (10%) indicated a desire for more fish of a smaller size. Of the five anglers wanting more but smaller fish, all indicated a preference for a limit liberalization versus year-round fishing. Of the 33 anglers wanting fewer but larger fish, 13 (40%) asked to accomplish it by a limit reduction, 8 (24%) asked for a shorter season and 12 (36%) by a gear restriction.

LaMont Reservoir-Gill Netting

Two overnight gill net sets at LaMont Reservoir retrieved on 29 June 1978 captured 831 Utah chubs, 10 hatchery rainbow and 7 rainbow-cutthroat hybrids (Table 4). Mean length of 40 Utah chubs captured in the gill nets were 170 mm (6.7 in), the mean length of the 10 hatchery rainbow was 229 mm (9.0 in) and the mean length of 7 rainbow cutthroat hybrids was 447 mm (17.6 in). It appears that the stunted population of Utah chubs in the reservoir are limiting the growth of planted hatchery rainbows. The hybrids (source unknown) appeared to be in excellent condition with the stomachs of most containing Utah chubs. Treatment would probably result in increased growth of the hatchery fish and heavier fishing pressure.

Table 1. Returns of spring and summer plants of 500 tagged rainbow trout in each of three reservoirs in Oneida County.

Reservoir	Date planted	Mean size	Returns through December,1978	Percent returns through December, 1978
Deep Creek	5/03/76	0.9/kg (1.9/lb)	96	19.2
Devils Creek	5/03/76	0.9/kg (1.9/lb)	95	19.0
Daniels	5/03/76	0.9/kg (1.9/lb)	83	16.6
Deep Creek	7/19/76	2.7/kg (5.9/lb)	58	11.6
Devils Creek	7/19/76	2.7/kg (5.9/lb)	58	11.6
Daniels	7/19/76	2.7/kg (5.9/lb)	70	14.0

Table 2. Angling methods at Daniels Reservoir in 1978.

Month	Number boat anglers		Number bank anglers	Number anglers using		
	Trolling	Still fishing		Flies	Lures	Bait
May	33	18	-	-	33	18
June	2	67	45	2	-	112
July	10	196	52	2	8	248
August	2	-	8	-	2	8
September	-	41	90	-	-	131
Totals:	47	322	195	4	43	517

Table 3. Preference questionnaire results from Daniels Reservoir, 1978.

Month and number anglers		Why fish				Size preference			Smaller by		Larger by		
		Close home	Good fishing	Like Spot	Big fish	Smaller	Same	Larger	Year round fish	Limit	Limit	Season	Gear
May	(7)	3	4	0	0	1	0	6	0	1	6	0	0
June	(15)	6	8	0	1	2	7	6	0	2	2	2	2
July	(22)	6	4	2	10	2	5	15	0	2	4	4	7
August	(5)	0	3	0	2	0	1	4	0	0	1	0	3
September	(4)	1	2	1	0	0	2	2	0	0	0	2	0
Totals:	(53)	16	21	3	13	5	15	33	0	5	13	8	12

Therefore, it should be treated when favorable water levels occur.

Glendale Reservoir-Gill Netting

Two overnight gill net sets retrieved from Glendale Reservoir on 30 August 1978, captured 27 mountain suckers, 4 wild rainbow, 1 hatchery rainbow, 5 cutthroat and 1 bluegill (Table 4). The mean length of 25 mountain suckers was 170 mm (6.7 in), the mean length of 5 rainbow trout was 292 mm (11.5 in) and the mean length of 5 cutthroat was 366 mm (14.4 in).

Foster Reservoir-Gill Netting

Two overnight gill net sets at Foster Reservoir retrieved 31 August 1978, caught 244 Utah chubs, 11 hatchery rainbow, 2 wild rainbow, 2 cutthroat and 1 bluegill (Table 4). The mean length of 60 Utah chubs was 188 mm (7.4 in) and the mean length of 11 hatchery rainbow was 279 mm (11.0 in). Foster Reservoir should be treated to reduce its Utah chub population when favorable water levels occur.

Oneida Reservoir-Gill Netting

We set nylon experimental gill nets in Oneida Reservoir on three different occasions in 1978. On 6 April a 3-hour gill net set captured 24 yellow perch and one Utah sucker. On 25 May, another 3-hour gill net set captured 7 yellow perch, 1 Utah chub and 1 carp. On 20 September, a 17-hour net set captured 576 yellow perch, 31 Utah suckers, 4 Utah chubs, 3 carp and 1 walleye. The walleye was 348 mm (13.7 in) in length and scale analysis indicated it was a I+ fish. Mean length of 90 yellow perch captured in the gill nets on 20 September was 178 mm (7.0 in). Mean length of 30 Utah suckers caught on the same date was 478 mm (18.8 in).

Walleye plants should be continued in Oneida Reservoir in an attempt to reduce the high numbers of stunted yellow perch and establish a better fishery. Gill netting should be continued on an annual basis to assess its walleye and yellow perch populations.

Chesterfield Reservoir-Gill Netting

On 3 November 1978, I retrieved two overnight experimental gill net sets in Chesterfield Reservoir after they had fished for 22 hours. The nets captured 15 hatchery rainbow, 6 rainbow of unknown origin, 3 cutthroat and 4 Utah chubs. The mean length of the 15 hatchery rainbow was 318 mm (12.5 in). Mean length of the 6 rainbow trout of unknown origin was 345 mm (13.6 in) and the mean length of the 4 Utah chubs was 188 mm (7.4 in).

Table 4. Experimental gill netting results from selected Franklin County reservoirs, 1978

Reservoir	Date retrieved and hours set	Number of fish captured						
		Cutthroat	Hatchery rainbow	Wild rainbow	Rainbow cutthroat hybrid	Bluegill	Utah chub	Mountain sucker
LaMont	29 June -23 hours	-	10	-	7	-	831	-
Glendale	30 August -20 hours	5	1	4	-	1	-	27
Foster	31 August -19 hours	2	11	2	-	1	244	-

We treated Chesterfield Reservoir on 25 August 1977, to reduce numbers of Utah chubs and carp present. The treatment appears only partially successful because of limited access to tributary streams on the Fort Hall Indian Reservation. The reservoir was replanted with trout in the fall of 1977 and their growth to date has been excellent. Continued releases of hatchery rainbow trout should be continued, along with cutthroat and brown trout.

McTucker Ponds-Gill Netting and Treatment

The construction of the McTucker Gravel Ponds near the upper end of American Falls Reservoir was completed in 1978. Three ponds make up this complex. I set one experimental gill net in each on 9 September 1978. The nets fished approximately 24 hours and caught Utah chubs in both the Northeast and Southeast Ponds (Table 5). I caught no fish in the West Pond. The ponds were treated with rotenone on 26 September 1978. Live box test with hatchery rainbow trout indicated they were detoxified by 29 October and were planted with catchable size rainbow trout shortly after that date. Attempts should be made to establish a warm water fish population in these ponds.

Creel Census

Heavily checked waters by department personnel in Region 5 during 1978 included Daniels Reservoir, Deep Creek Reservoir, Devils Creek Reservoir, Hawkins Reservoir, Twin Lakes and Weston Reservoir (Table 6).

Table 5. Sizes of the three different McTucker Ponds and twenty-four hour gill netting results.

Pond	Size	Number of fish captured				
		Date retrieved	Yellow perch	Brown bullhead	Utah chub	Utah sucker
Northeast	29,604 cu m (24 ac ft)	9/14/78	-	-	14	1
Southeast	41,940 cu m (34 ac ft)	9/14/78	4	1	9	-
West	61,675 cu m (50 ac ft)	9/14/78	-	-	-	-

Table 6. Anglers interviewed, hours fished and catch from various reservoirs in Region 5 during 1978.

Month and reservoir	Number of anglers interviewed			Total hours fished	Number of fish caught					Fish per hour
	Resident	Nonresident	Total		Rainbow	Cutthroat	Large mouth bass	Blue gill	Total	
American Falls Reservoir										
April	3	-	3	2	-	-	-	-	0	.00
Blackfoot Reservior										
June	7	1	8	34	13	3	-	-	16	.47
Chesterfield Reservoir										
May	6	-	6	12	4	-	-	-	4	.33
June	13	-	13	66	13	1	-	-	14	.21
Totals	19	-	19	78	17	1	-	-	18	.23
Condie Reservoir										
February	16	-	16	35	18	-	2	3	23	.66
May	5	18	23	51	28	-	-	6	34	.67
June	6	2	8	10	-	-	2	1	3	.30
Totals	27	20	47	96	46	-	4	10	60	.63
Crowthers Reservoir										
June	2	3	5	15	18	-	-	-	18	1.20
July	-	4	4	6	1	-	-	-	1	.17
Totals	2	7	9	21	19	-	-	-	19	.90

Table 6 (Continued). Anglers interviewed, hours fished and catch from various reservoirs in Region 5 during 1978.

Month and reservoir	Number of anglers interviewed			Total hours fished	Number of fish caught			Fish per hour
	Resident	Nonresident	Total		Rainbow	Cutthroat	Total	
Daniels Reservoir								
May	17	34	51	187	204	18	222	1.19
June	45	73	118	410	271	1	272	.66
July	127	132	259	876	741	8	749	.86
August	4	10	14	18	7	-	7	.39
September	69	55	174	406	341	-	341	.84
Totals	262	304	566	1897	1564	27	1591	.84
Deep Creek Reservoir								
May	5	15	20	63	22	4	26	.41
June	14	29	43	105	34	3	37	.35
July	36	57	93	262	78	2	80	.31
August	-	6	6	9	-	-	0	.00
September	6	6	12	24	5	-	5	.21
October	13	14	27	70	19	9	28	.40
Totals	74	127	201	533	158	18	176	.33
Devils Creek Reservoir								
May	18	10	28	99	3	-	3	.03
June	48	26	74	241	68	9	77	.32
July	35	41	76	237	68	3	71	.30
August	11	13	24	34	23	1	24	.71
September	14	2	16	47	10	-	10	.21
Totals	126	92	218	658	172	13	185	.28

Table 6 (Continued). Anglers interviewed, hours fished and catch from various reservoirs in Region 5 during 1978.

Month and reservoir	Number of anglers interviewed			Total hours fished	Number of fish caught					Fish per hour
	Resident	Nonresident	Total		Rainbow	Bluegill	Yellow Perch	Largemouth bass	Total	
Foster Reservoir										
May	4	6	10	21	2	-	-	-	2	.09
June	-	2	2	2	1	-	-	-	1	.50
August	1	6	7	10	7	-	-	-	7	.70
Totals	5	14	19	33	10	-	-	-	10	.30
Glendale Reservoir										
August	-	7	7	25	1	1	-	-	2	.08
Hawkins Reservoir										
May	16	-	16	70	33	-	-	-	33	.53
June	39	7	46	138	58	-	-	-	58	.42
July	43	-	43	113	78	-	-	-	78	.69
Totals	98	7	105	321	169	-	-	-	169	.53
Johnson Reservoir										
April	3	2	5	4	-	-	-	-	-	.00
June	2	-	2	8	-	-	7	-	7	.88
August	-	3	3	4	1	-	-	1	2	.50
Totals	5	5	10	16	1	-	7	1	9	.56

Table 6 (Continued). Anglers interviewed, hours fished and catch from various reservoirs in Region 5 during 1978.

Month and reservoir	Number of anglers interviewed			Total hours fished	Number of fish caught					Fish per hour
	Resident	Nonresident	Total		Rainbow	Largemouth Bass	Bluegill	Cutthroat	Total	
LaMont Reservoir										
May	5	2	7	9	4	-	-	-	4	.44
June	1	2	3	5	6	-	-	-	6	1.20
Totals	6	4	10	14	10	-	-	-	10	.71
St. Johns Reservoir										
June	4	5	9	39	21		-	-	21	.54
July	2	-	2	4	2	4	-	-	6	1.50
September	11	-	11	48	16	4	-	-	20	.42
Totals	17	5	22	91	39	8	-	-	47	.52
Twin Lakes Reservoir										
May	5	6	11	18	5	-	-	-	5	.28
July	69	4	73	184	27	4	166	-	197	1.07
Totals	74	10	84	202	32	4	166	-	202	1.00
Treasureton Reservoir										
January	7	-	7	34	8	-	-	-	8	.23
May	12	6	18	57	8	-	-	6	14	.25
June	7	11	18	58	11	-	-	2	13	.22
Totals	26	17	43	149	27	-	-	8	35	.23

Table 6 (Continued). Anglers interviewed, hours fished and catch from various reservoirs in Region 5 during 1978.

Month and reservoir	Number of anglers interviewed			Total hours fished	Number of fish caught				Fish per hour
	Resident	Nonresident	Total		Rainbow	Yellow Perch	Large-mouth bass	Total	
Twenty Four Mile Reservoir									
May	26	-	26	128	41	-	-	41	.32
July	6	2	8	23	6	-	-	6	.26
Totals	32	2	34	151	47	-	-	47	.31
Weston Reservoir									
January	66	4	70	187	60	220	1	281	1.50
June	23	3	26	49	-	39	5	44	.90
July	15	2	17	21	-	3	-	3	.14
August	18	-	18	47	-	54	6	60	1.28
Totals	122	9	131	304	60	316	12	388	1.28
Winder Reservoir									
May	2	3	5	9	2	-	-	2	.22
Wiregrass Reservoir									
May	16	-	16	53	22	-	-	22	.41
June	10	1	11	41	17	-	-	17	.41
July	3	-	3	6	1	-	-	1	.17
Totals	29	1	30	100	40	-	-	40	.40

JOB PERFORMANCE REPORT

State of Idaho

Name: REGIONAL FISHERIES MANAGEMENT INVESTIGATIONS

Project No. F-71-R-3

Title: Region 5 Stream Investigations

Job No. V-c

Period Covered: 1 January 1978 to 31 December 1978

ABSTRACT

Electrofishing the Portneuf River between McCammon and Inkom on 7 July 1978 showed an excellent population of brown trout were present. In addition electrofishing in the upper Portneuf River near the Steel Bridge indicated a good population of wild rainbow trout; however, cattle grazing may have some-what affected the population. A preference questionnaire of the upper Portneuf River anglers indicated most were happy with the size of fish caught.

Electrofishing in the Bear River near the Highway 34 bridge indicated a large number of mountain whitefish present. Electrofishing in various stream sections indicated a low number of trout present in Whiskey Creek, a high number of eastern brook trout in Ledge Creek, and low numbers of trout in Summit Creek and the Malad River.

Electrofishing indicated that the Little Blackfoot River and Rock Creek have low numbers of game fish and Tincup Creek a high number of cutthroat trout.

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OBJECTIVES

To assess trout populations in the Portneuf River and preference of anglers fishing it.

To assess game fish populations in selected sections of the Bear River and tributaries and effects of proposed stream channel alterations.

To assess the game fish population in the Little Blackfoot River and the Blackfoot River near Blackfoot.

To assess the fish populations in Rock Creek and tributaries and assist in the collection of water quality information from the Snake River down-stream from the new American Falls Dam.

To assess fishing pressure and harvest from various streams in Region 5.

TECHNIQUES USED

Portneuf River and City Creek Studies

On 7 July and 28 September 1978, we electrofished sections of the Portneuf River near McCammon and Chesterfield, respectively. Purpose of the electrofishing was to assess the river's fish population.

We used a questionnaire to assess the preference of anglers fishing the Portneuf River in 1978.

We assessed trout losses in City Creek near Pocatello as a result of construction activities in the stream. All fish measurements are total length.

Bear River Drainage Studies

In 1978 we electrofished sections of the Bear River north of Preston, Whiskey Creek south of Grace, Ledge Creek near Soda Springs, Summit Creek north of Malad, and the Malad River south of Malad. All fish measurements are total length.

Blackfoot River Drainage Studies

In 1978 we electrofished a section of the Blackfoot River immediately upstream from the Blackfoot Equalizing Reservoir and the Little Blackfoot River near Henry.

Rock Creek Studies

On 23 February 1978 we electrofished Rock Creek and the East Fork of Rock Creek to assess its fish population. This stream is located south and

west of the city of American Falls. All fish measurements are total length.

Salt River Tributary Studies

In 1978 we electrofished sections of Tincup Creek and Stump Creek to assess their fish populations. All fish measurements are total length.

Snake River Studies

As a result of low dissolved oxygen concentrations, we assisted personnel from the Health and Welfare Department with sample collections and assessing conditions of the Snake River immediately downstream from the new American Falls Dam.

Creel Census - Streams

Virtually all personnel in Region 5 helped with the collection of stream creel census information. Most, however, was collected by officers of the Enforcement Bureau.

FINDINGS

Portneuf River and City Creek Studies

We electrofished a section of the Portneuf River between Inkom and McCammon on 7 July 1978 to assess its fish population. Specifically, electrofishing was done in an approximate 2,300-m stream section close to old Highway 30 from the Thompson residence downstream to the Lish Road junction. We captured 66 brown trout (4 of definite hatchery origin) and 1 rainbow trout (Table 1). In addition, this river section contained numerous redside shiners, and some bluehead and Utah suckers. We also observed 3 cottids and 1 speckled dace. Brown trout plants should be discontinued in this river section because of their present high population and the low number of fish appearing to be of hatchery origin.

Electrofishing in the Portneuf River in the vicinity of the Steel Bridge on the Chesterfield Road indicated a good population of wild rainbow present (Table 1); however, this area has been degraded by streambank cattle grazing. Future efforts should be made in that area to obtain population estimates by mark and recapture methods.

We obtained questionnaire information from 58 Portneuf River anglers in 1978 (Table 2). When asked why they fish the Portneuf River, 22 (38%) chose close to home, 19 (33%) chose good fishing, and 17 (29%) replied that they liked the spot. In no case did any anglers reply that they fished the river because of the big fish present. Of this total, 7 anglers (12%) stated they would like to

Table 1. Electrofishing results from the Portneuf River and City Creek, 1978.

Stream and location	Date	Number of trout captured and mean length			
		Brown	Wild rainbow	Hatchery rainbow	Cutthroat
Portneuf River - between Inkom and McCammon from Highway 30-Lish Road instersection upstream approximately 2,300 meters.	7/7/78	66 (245 mm)	1 (238 mm)	-	-
Portneuf River - from Steel Bridge on the Chesterfield Road downstream to Wooden Bridge.	9/28/78	-	72	29	14
City Creek - approximately 1,100 meters upstream from end of oiled road at old stream crossing. Electrofished approximately 100 meters upstream from crossing.	7/28/78	-	-	-	11 (185 mm)

Table 2. Preference questionnaire results from the Portneuf River upstream from Lava Hot Springs during 1978.

Month and number anglers	Why fish				Size preference			Smaller by		Larger by		
	Close home	Good fishing	Like spot	Big fish	Smaller	Same	Larger	Year round fish	Limit	Limit	Season	Gear
May (26)	14	12	0	0	0	26	0	0	0	0	0	0
June (14)	2	5	7	0	4	2	8	2	2	5	1	2
July (15)	5	1	9	0	3	6	6	1	2	1	3	2
August (3)	1	1	1	0	0	1	2	0	0	1	1	0
Totals (58)	22	19	17	0	7	35	16	3	4	7	5	4

catch twice the numbers of fish as at present but only one-half the size, 35 (60%) were happy with the present size, and 16 (28%) wanted one-half the present numbers but twice the size.

On or about 24 July 1978, water was diverted from City Creek near Pocatello by a construction company. We captured 11 cutthroat while electrofishing a 100-m section immediately upstream from the diversion (Table 1). An estimated 230 cutthroat weighing approximately 15 kg (35 lb) were lost as a result of the diversion. The construction company responsible made restitution for fish losses and time spent investigating this matter.

Bear River Drainage Studies

In 1978, we electrofished sections of the Bear River near Preston, Whiskey Creek south of Grace, Ledge Creek near Soda Springs, Summit Creek north of Malad, and the Malad River south of Malad. The exact location and results of this electrofishing are given in Table 3. Specific information regarding each site is as follows:

Bear River

We electrofished the Bear River downstream from the Highway 91 and Highway 34 bridge crossing on 20 September and 31 August 1978, respectively. We saw approximately 20 carp, 1 Utah sucker, and 1 bluehead sucker downstream from the Highway 91 bridge. We observed an estimated 450 mountain whitefish downstream
from the Highway 34 bridge with most located upstream from the West Cache Canal diversion. Mean length of 40 whitefish in this river section was 231 mm (9.1 in). During the electrofishing we observed no trout or channel catfish which were planted in this section in 1977 and 1978. This channel catfish plant should be diverted to the Grace-Cleveland area of the river in an attempt to establish a population there.

Whiskey Creek

On 2 October 1978, we electrofished a section of Whiskey Creek on the Gene Rasmussen property south of Grace. The section was located from 50 to 150 m downstream from his north property line in a section proposed for alteration. During two electrofishing passes in this stream we saw 2 trout (species unknown) and numerous speckled daces.

Ledge Creek

On 18 September 1978, we electrofished an 80-m section of Ledge Creek near the city of Soda Springs. The electrofishing was started approximately 800 m upstream from the Wood Canyon Road, at a fish screen irrigation diversion, and continued upstream to a waterfall. We estimated by selective removal, that 76 eastern brook trout were present in this section. Mean size of 40 brook trout was 170 mm (6.7 in).

Summit Creek

We electrofished Summit Creek, also called Power House Creek, north of Malad in two different locations on 6 September 1978. The purpose of the electrofishing was to monitor the effects of recently installed stream improvement structures by the United States Forest Service. We did not see any fish in a 95-m section located 480 m upstream from the entrance to Summit Creek campground. We captured 12 cutthroat and 6 wild rainbow in a 95-m stream section located at the downstream end of the same campground. Waterfalls, high stream velocities, and the lack of suitable cover might limit fish range in this stream to between the two areas electrofished. Additional fish population assessment work should be done in this stream within a few years to monitor fish population changes.

Malad River

We floated and electrofished a section of the Malad River from 3-8 k (2-5 mi) upstream from the Utah state line on 10 March 1978. We captured 23 carp, 8 brown bullheads, 1 Utah sucker and 1 Utah chub. Mean length of 23
carp and 8 brown bullheads was 246 mm (9.7 in) and 132 mm (5.2 in), respectively. The stream in this area is badly polluted by silt and feedlot runoff. In addition, it has a mud bottom and no pools or riffles.

Blackfoot River Drainage Studies

On 24 February 1978, we floated and electrofished a section of the Black-foot River from the Lincoln Creek Road downstream to the Blackfoot Equalizing Reservoir. We captured 30 mountain whitefish and 19 Utah suckers during this electrofishing. Mean length of the 30 mountain whitefish and 19 Utah suckers was 273 mm (10.8 in) and 458 mm (18.0 in), respectively.

On 11 July 1978, we electrofished the Little Blackfoot River in five different locations. We observed no trout during the electrofishing with speckled dace and mountain suckers being the most common fish (Table 3). We planted cutthroat trout in this stream in late summer to enhance its trout population.

Rock Creek Studies

On 23 February 1978, we electrofished Rock Creek at three different lo-cations and the East Fork of Rock Creek at one. We saw only 1 fish (a cottid) while electrofishing a 60-m stream section near Register Rock State Park. We saw 4 redside shiners, 4 longnose dace and 1 cottid while electrofishing a 100-m stream section downstream from the bridge crossing west of Rockland and 3 cottids in a 100-m stream section at a crossing 10 kg upstream from Rockland. We did not observe any trout while electrofishing at these three stations.

Table 3. Electrofishing results from the Little Blackfoot River on 11 July 1978.

Location	Stream length electrofished	Number of fish captured	
		Speckled dace	Mountain sucker
From Henry bridge upstream	70 m	15	-
Downstream from big beaver dam	94 m	12	4
Downstream end of BLM Preference Rights Lease	94 m	26	11
Middle of BLM Preference Right Lease - from culvert crossing downstream	94 m	6	3
At upper end of BLM Preference Right Lease	94 m	6	-

On 23 February, we electrofished a 100-m stream section on the East Fork of Rock Creek downstream from a bridge crossing, 3 km east of Rock- , land. During the electrofishing, we captured 22 wild rainbow, 2 cutthroat and 22 cottids. Mean length of 17 rainbow and the 2 cutthroat was 147 mm (5.8 in) and 260 mm (10.3 in), respectively. The East Fork of Rock Creek is about 6 km long and originates as a constant flow spring. It flows about .7 cu m/sec (25 cfs) at a temperature of about 10 C (50 F). In late 1978, a private fish hatchery was proposed for this stream.

Salt River Tributary Studies

On 18 August 1978, we electrofished Tincup Creek in two locations (Table 4). This stream contains a high number of different fish species (6 were captured in one electrofishing section). The stream also contains fine spotted or Snake River cutthroat and brown trout. Mean length of 11 cutthroat at mile post 103 (Highway 34) and 13 cutthroat at a wooden bridge crossing 3.4 km (2.1 mi) upstream from Highway 34 on a dirt road was 184 mm (7.2 in) and 156 mm (6.1 in), respectively.

On 20 July and 8 August 1978, we attempted to electrofish Stump Creek but were unsuccessful. Equipment problems and/or water conductivity may have caused this problem. The fish populations in Stump Creek and tributaries should be assessed in 1979.

Creel Census

Catch rates of trout from stream varied considerably (Table 5) during 1978. We checked high numbers of anglers fishing the Bear River, the Black-foot River and the Portneuf River.

Table 4. Electrofishing results from Tincup Creek on 8 August 1978.

Location	Length electrofished	Number of fish captured					
		Cutthroat	Brown trout	Cottid	Mountain sucker	Longnose dace	Speckled dace
Due south of mile post 103 at stream bend.	94 m	16	-	3	2	6	2
Upstream (by road) 3.4 km from junction of Highway 34 and Tincup Creek to wooden bridge. Electrofished from bridge downstream.	94 m	16	1	2	2	5	2

Table 5. Anglers interviewed, hours fished and catch from various streams in Region 5 during 1978.

Month and stream	Number of anglers interviewed			Total hours fished	Number of fish caught				Fish per hour
	Resident	Nonresident	Total		Rainbow	Cutthroat	Brown trout	Total	
Bear River (Grace area)									
May	15	16	31	44	19	-	-	19	.43
July (Oneida Narrows)	4	1	5	5	4	-	5	9	1.80
Totals	19	17	36	49	23	-	5	28	.57
Crow Creek									
May	6	2	8	32	-	6	17	23	.72
Cottonwood Creek									
June	1	-	1	3	-	5	-	5	1.67
East Fork Rock Creek									
May			35	76	101	10	-	111	1.46
Pebble Creek									
May	7	-	7	7	2	2	-	4	.57

Table 5 (Continued). Anglers interviewed, hours fished and catch from various streams in Region 5 during 1978.

Month and stream	Number of anglers interviewed			Total hours fished	Number of fish caught				Fish per hour
	Resident	Nonresident	Total		Rainbow	Cutthroat	Brown trout	Total	
Portneuf River (Upper)									
May	57	5	62	159	63	2	-	65	.41
June	21	4	25	62	36	5	-	41	.66
July	26	-	26	48	19	2	-	21	.44
August	8	-	8	9	9	3	-	12	1.33
Totals	112	9	121	278	127	12	-	139	.50
Portneuf River (Lower)									
June	13	-	13	38	5	-	4	9	.21
July	3	-	3	5	-	-	-	-	.00
Totals	16	-	16	43	5	-	5	9	.21
Sage Creek									
May	6	3	9	23	-	16	29	45	1.96
Snake River (below American Falls Dam)									
May			90	232	182	3	9	194	.84

Table 5 (Continued). Anglers interviewed, hours fished and catch from various streams in Region 5 during 1978.

Month and stream	Number of anglers interviewed			Total hours fished	Number of fish caught					Fish per hour
	Resident	Nonresident	Total		Rainbow	Cutthroat	Brown trout	Eastern brook	Total	
Slug Creek										
May	2	-	2	8	-	-	-	-	6	.75
St. Charles Creek										
July	-	3	3	4	2	2	-	2	6	1.50
Stump Creek										
May	-	-	1	1	-	-	-	-	-	.00
June	-	-	11	31	-	51	-	-	51	1.65
July	-	-	17	29	-	63	1	1	65	2.24
Totals	-	-	29	61	-	114	1	1	116	1.90
Trout Creek										
May	14	6	20	25	2	-	-	15	17	.68

ABSTRACT

During 1978 I reviewed and made comments on 25 proposed stream channel and four lakeshore alterations. I also reviewed and made comments on 14 water right applications.

I collected fish from various locations affected by the Teton Dam flood. Samples from the fish will be tested for various pesticides.

We documented the existence of a virtually pure strain of Bonneville cutthroat Salmo Clarki Utah in Giraffe Creek in 1978.

Author:

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OBJECTIVES

To provide technical guidance to public and private individuals or agencies on matters pertaining to fisheries management in Region 5.

FINDINGS

I reviewed and made comments to the State of Idaho Department of Water Resources on 25 proposed stream channel alterations in 1978. Eleven involved the Portneuf River and tributaries, seven the Bear River and tributaries, five the Snake River and two the Blackfoot River and tributaries. Comments regarding many of these alterations were also sent to the U.S. Army Corps of Engineers as input for their stream alteration permit program.

Most of the proposed stream alterations in Region 5 had relatively minor impacts on fish populations. We opposed a proposal to partially drain a marsh on Marsh Creek south of Downey because of possible harm to its associated wildlife populations. We supported a proposal by Bannock County to build stream improvement structures in Rapid and Hoot Owl creeks as they had previously made unauthorized alterations in these streams.

I reviewed and made comments to the U.S. Army Corps of Engineers regarding four proposed shoreline alterations at Bear Lake. Each alteration, although small, could have cumulative long term effects on the fish population at Bear Lake.

I attended a hearing, reviewed and made comments on the proposed Blackfoot Dam Modification Project. The projects effects on fish appear to be minor, and in fact, could help if accomplished as per our recommendations. Specifically, we asked for maintenance flows in the river downstream and possible measures to aeriate Dike Lake.

As part of a cooperative agreement with the State of Idaho Department of Health and Welfare I collected a total of 127 fish for pesticide testing at three different locations affected by the Teton Dam flood in January, May and August, 1978. The three locations were Neeley and Shelley on the Snake River and Clear Creek on the Fort Hall Bottoms.

I reviewed and made comments on 14 water right applications in 1978. The effects of most were minor; however, a proposal to divert most of the East Fork of Rock Creek into a fish hatchery would seriously effect the stream's
trout population.

With the help of U.S. Forest Service personnel we collected 30 cutthroat trout from Giraffe Creek. We sent the trout to Dr. Richard L. Wallace, Associate Professor of Zoology at the University of Idaho for classification. Dr. Wallace classified the fish as virtually pure Bonneville cutthroat Salmo clarki utah. In 1979 we plan to make additional collections in Giraffe Creek and adjacent drainages to document the fishes distribution and abundance.

Other regional fisheries matters I was involved in included gathering information for and testifying at an administrative hearing regarding fish losses from a private farm pond as a result of the Teton flood, attempting to acquire public access to Weston Reservoir, possible acquisition of water rights in Upper Deep Creek Reservoir and reviewing a proposed fish passage mortality study at the new American Falls Dam.

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